



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Holger Schlueter  
Serial No. : 10/763,390  
Filed : January 26, 2004  
Title : FIBER LASER

Art Unit : 2828  
Examiner : Unknown

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REQUEST FOR CORRECTED OFFICIAL FILING RECEIPT

Please correct the Filing Receipt for the above-referenced application to correct the claim for domestic priority. Specifically, this application claims the benefit of U.S. provisional application Serial Nos. 60/442,123, filed 1/24/2003, and 60/470,446, filed May 15, 2003, as shown on the attached copy of the first page of the specification of this application.

Please supply a corrected Filing Receipt to the undersigned with respect to this application. A copy of the original Filing Receipt showing the desired changes in red ink is attached for your convenience.

No fee is believed to be due. If, however, there are any charges or credits, please apply them to Deposit Account No. 06-1050.

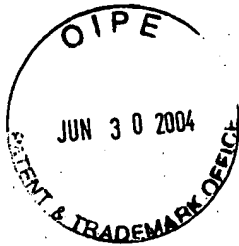
Respectfully submitted,

Date: \_\_\_\_\_

6/30/04

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# FIBER LASER

## CLAIM OF PRIORITY

This application claims priority under 35 USC §119(e) to U.S. Patent Applications Serial No. 60/442,123, filed on January 24, 2003, and Serial No. 60/470,446, filed on May 15, 2003, the entire contents of which are hereby incorporated by reference.

## TECHNICAL FIELD

This invention relates to lasers, and more particularly to fiber lasers.

## BACKGROUND

Diode pumped fiber lasers have a long, thin geometry that allows better heat removal than the geometry of bulk solid state lasers. Currently, pump light, often piped through fibers from pump lasers, enters an outer core of the fiber laser, where it is confined and redirected to pass through an inner core of the fiber laser where it excites laser active material to produce and amplify light. Pump light may enter the fiber either through the end of the fiber or through the side of the fiber.

The output wavelength of many solid state lasers is between about 1-2  $\mu\text{m}$ . Semiconductor materials can be doped with dopants such as Nd, Er, Yb, Vn to achieve a laser output within this wavelength range. Therefore, the following text assumes that the below-described fiber lasers have an output wavelength in this range. In case the output wavelength differs from this assumption, dimensions of the fiber laser are scaled appropriately with the output wavelength.

To convert pump light power into output laser power at the desired wavelength over the length of the fiber, a "double-clad fiber laser" has been used. Such a double-clad fiber laser typically consists of a single-mode core (for the output laser wavelength) that is embedded in a multi-mode cladding (for the pump laser wavelength), which itself can be embedded in an outer cladding.

The multi-mode cladding of a fiber laser has a diameter that is on the order of several ten to several hundred  $\mu\text{m}$  in diameter. The multi-mode cladding transmits the light from



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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/763,390	01/26/2004	2828	0.00	14624-004001	21	30	2

26161  
FISH & RICHARDSON PC  
225 FRANKLIN ST  
BOSTON, MA 02110



CONFIRMATION NO. 4590

## FILING RECEIPT



\*OC000000012487989\*

Date Mailed: 04/30/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

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Avon, CT

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Action Code:	* LOWEST OFF
Base Date:	4. 30. 04
Due Date:	6. 30. 04
Deadline:	11. 30. 04
Initial:	NAN

Domestic Priority data as claimed by applicant \*

This appln claims benefit of 60/442,123 01/24/2003  
and claims benefit of ~~60/470,446 06/19/2003~~

60/470,446 05/15/2003

(\*)Data provided by applicant is not consistent with PTO records.

Foreign Applications

If Required, Foreign Filing License Granted: 04/27/2004

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Fiber laser

Docketed By Billing Secretary	
Due Date:	6. 30. 04
Deadline:	11. 30. 04
Initials:	HAN

Preliminary Class

372

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